
**IMPLANTABLE CARDIAC STIMULATION DEVICE INCLUDING
AN OUTPUT CIRCUIT THAT PROVIDES
ARBITRARILY SHAPED DEFIBRILLATION WAVEFORMS**

Abstract of the Disclosure

An output circuit for use in an implantable cardiac defibrillation provides an output pulse having a waveform of virtually any desired shape. The device includes a sensing circuit that senses cardiac activity. An arrhythmia detector detects fibrillation responsive to the cardiac activity signal. The device further includes an output circuit that provides a stimulation output pulse when the arrhythmia detector detects a cardiac arrhythmia. The output circuit includes an H-bridge having a pair of switching devices which control the output pulse waveform with pulse-width modulation and a second pair of switching devices that control the output pulse polarity.